

## Abstract

Spread spectrum multiple access codes for use in a spread spectrum multiple access communications system and a method of generating such codes are disclosed. In one embodiment, an  $N$ -bit spread spectrum code is first transformed with an ideal periodic auto-correlation function to an orthogonal group of spread spectrum multiple access codes. Then, each code's length is extended by  $2\Delta$  elements, where  $\Delta$  denotes a predetermined width of a desired zero-correlation window for the code's auto-correlation function. The extended codes can be used for the spread operation, and the non-extended codes can be used for the de-spread operation.

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